

FIGURE 1A



765 774 783 792 801 810  
 ATC ACC CCA TTG CTA AAC CAG TGG ACA TAT CAG GCC ATG GTC CAC GAA CTA CTA  
 I T P L L N Q W T Y Q A M V H E L L

819 828 837 846 855 864  
 GGC ATA AAC AAT CGG ATT GAT CTT TCC AGA GTG CCG GGA ATC AGT AAA GAC  
 G I N N R I D L S R V P G I S K D

873 882 891 900 909 918  
 TTA AGA GAA GTG GTC CTA TCT GCT GAA AAT GAT GAA TTC TAT GCT AAT AAT ATG  
 L R E V V L S A E N D E F Y A N N M

927 936 945 954 963 972  
 TAC CTG AAC TTT GCT GAG ATT GGT AGC AAT ATA AAG AAT CTC ATG GAA GAT TTT  
 Y L N F A E I G S N I K N L M E D F

981 990 999 1008 1017 1026  
 CAG AAG AAG AAA CCA AAA GAA CAG CAA AAA CTA GAA TCA ATA GCA GAC ATG AAG  
 Q K K P K E Q Q K L E S I A D M K

1035 1044 1053 1062 1071 1080  
 GCG TTT GTT GAG AAT TAT CCA CAG TTC AAG AAA ATG TCT GGG ACT GTT TCA AAG  
 A F V E N Y P Q F K K M S G T V S K

1089 1098 1107 1116 1125 1134  
 CAT GTG ACA GTG GTT GGA GAA CTG TCT CGA TTG GTC AGT GAA CGG AAT CTG CTG  
 H V T V V G E L S R L V S E R N L L

FIGURE 1C

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

[illegible]

1143	GAG GTT TCA GAG GTT GAG CAA GAA CTG GCC TGT CAA AAT GAC CAT TCT AGT GCT	1170	1179	1188
	E V S E V E Q E L A C Q N D H S A			
1197	CTC CAG AAT ATA AAA AGG CTT CTG CAG AAC CCC AAA GTG ACA GAG TTT GAT GCT	1224	1233	1242
	L Q N I K R L L Q L Q N P K V T E F D A			
1251	GCC CGC CTG GTG ATG CTT TAT GCT TTA CAT TAT GAG CGA CAC AGC AGC AAT AGC	1278	1287	1296
	A R L V M L Y A L L H Y E R H S S N S			
1305	CTG CCA GGA CTA ATG ATG GAC CTC AGG AAT AAA GGT GTT TCT GAG AAG TAT CGA	1332	1341	1350
	L P G L M M D L R N K G V S E K Y R			
1359	AAG CTC GTG TCT GCA GTT GTT GAA TAT GGT GGT AAA CGA GTC AGA GGA AGT GAC	1386	1395	1404
	K L V S A V V E Y G G K R V R G S D			
1413	CTC TTC AGC CCC AAA GAT GCT GTG GCT ATC ACC AAA CAA TTC CTC AAA GGA CTG	1440	1449	1458
	L F S S P K D A V A I T K Q F L K G L			
1467	AAG GGA GTA GAA AAT GTA TAT ACA CAG CAT CAA CCT TTC CTA CAT GAA ACC CTG	1494	1503	1512
	K G V E N V Y T Q H Q P F L H E T L			

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

0000000000

1521	1530	1539	1548	1557	1566
GAT CAT CTC	ATC AAA GGA AGG CTT AAG GAA AAC CTA TAT CCT TAT				TTA GGC CCC
D H L I K G R L K E N L Y P Y L G P					
1575	1584	1593	1602	1611	1620
AGC ACA CTC	AGA GAC AGA CCT CAG GAT ATC ATT GTG TTT GTA ATT GGA GGA GCC				
S T L R D R P Q D I I V F V I G G A					
1629	1638	1647	1656	1665	1674
ACC TAT GAA GAG GCT CTA ACA GTT TAT AAC CTG AAC CGC ACC ACT CCT GGA GTG					
T Y E E A L T T V Y N L N R T T P G V					
1683	1692	1701	1710	1719	1728
AGG ATT GTC CTG GGA GGC ACC ACA GTG CAC AAC ACG AAA AGT TTC CTA GAG GAA					
R I V L G G T T V H N T K S F L E E					
1737	1746	1755	1764	1773	1782
GTT CTG GCT TCT GGA CTG CAC AGC CGA AGC AAG GAG AGC TCT CAA GTC ACA TCA					
V L A S G L H S R S K E S S Q V T S					
1791	1800	1809	1818	1827	1836
AGG TCA GCG AGC AGA AGA TGA AAC GGT GGT TGG GGG AAG GGC ACA GCT TCC TCT					
R S A S R R					
1845	1854	1863	1872	1881	1890
CTT GTC CCC ACT ACA GGT TTT CCC TAC TAA ACA AAG GTG TTG GAG AGC AGC TTT					

FIGURE 1E

# Figure 1F

1899	1908	1917	1926	1935	1944
GGG TTC TGT GCT GGT TGT TAG AAC TCA TCT CCA GGT AGC CCA CGG ATA CGT GGT					
1953	1962	1971	1980	1989	1998
TGG CAC AGA CAC AAG ACT CCC AGA GTT GTC CTA ACA ATA AGT CTG AGC CCA TCT					
2007	2016	2025	2034	2043	2052
CAA CCC ACT TTT CTC CGG TAG TCT TTA TGT ATC TGT TAG CAC AAT CAC TTC AGT					
2061	2070	2079	2088	2097	2106
TAC TGA TGA ATT TTG TTG GGA TCT GAC TTG GGG AAA GGG TTA TCA GAG CCT AGA					
2115	2124	2133	2142	2151	2160
GGG GCT TAA AAA GTA ATC ATT TGA TGT ACA TAC CAC ACT CCT TGG CTT CCT TTC					
2169	2178	2187	2196	2205	2214
TCT TCC CTT AAC CCT TTC TGC TTT TCA TTA ACC ACA TTC CTG CAC AAC TCA TTT					
2223	2232	2241	2250	2259	2268
CTG AAA ACC TAC CAT GTT TCT TTA CAG AGC CAT CCA AAA ATT TTT TGT CCC TAC					

FIGURE 1F

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

2277 2286 2295 2304 2313 2322

ATA GCA ATT TTC TGT GGC ACT GAG AAA CCA TGT ATG ACC ACA ATA AAA ATC CAT

2331 2340  
TTT GTG AAA GGA AAA AAA AAA 3'

FIGURE 1G

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

SECRET

1	MN	V	F	A	V	K	Q	Y	I	S	K	M	I	E	D	S	G	P	G	M	K	V	L	L	M	D	K	E	T	T	G	I	V	S	M	V	Y	T	75871		
1	MN	V	F	A	V	K	Q	Y	I	S	K	M	I	E	D	S	G	P	G	M	K	V	L	L	M	D	K	E	T	T	G	I	V	S	M	V	Y	T	GI 1703494		
41	Q	S	E	I	L	Q	K	E	V	Y	L	F	E	R	I	D	S	Q	N	R	E	I	M	K	H	L	K	A	I	C	F	L	R	P	T	K	E	N	V	D	75871
41	Q	S	E	I	L	Q	K	E	V	Y	L	F	E	R	I	D	S	Q	N	R	E	I	M	K	H	L	K	A	I	C	F	L	R	P	T	K	E	N	V	E	GI 1703494
81	Y	I	I	Q	E	L	R	R	P	K	Y	T	I	Y	F	I	Y	F	S	N	V	I	S	K	S	D	V	K	S	L	A	E	A	D	E	Q	E	V	V	A	75871
81	Y	L	I	Q	E	L	R	R	P	K	Y	S	I	Y	F	I	Y	F	S	N	V	I	S	K	S	D	V	K	S	L	A	E	A	D	E	Q	E	V	V	A	GI 1703494
121	E	V	Q	E	F	Y	G	D	Y	I	A	V	N	P	H	L	F	S	L	N	I	L	G	C	C	Q	G	R	N	W	D	P	A	Q	L	S	R	T	T	Q	75871
121	E	V	Q	E	F	Y	G	D	Y	I	A	V	N	P	H	L	F	S	L	N	I	L	G	C	C	Q	G	R	N	W	D	P	A	Q	L	S	R	T	T	Q	GI 1703494
161	G	L	T	A	L	L	S	L	K	K	C	P	M	I	R	Y	Q	L	S	S	E	A	A	K	R	L	A	E	C	V	K	Q	V	I	T	K	E	Y	E	75871	
161	G	L	T	A	L	L	S	L	K	K	C	P	M	I	R	Y	Q	L	S	S	E	A	A	K	R	L	G	E	C	V	K	Q	V	I	S	K	E	Y	E	GI 1703494	
201	L	F	E	F	R	R	T	E	V	P	P	L	L	I	L	D	R	C	D	D	A	I	T	P	L	L	N	Q	W	T	Y	Q	A	M	V	H	E	L	L	75871	
201	L	F	E	F	R	R	T	E	V	P	P	L	L	I	L	D	R	C	D	D	A	I	T	P	L	L	N	Q	W	T	Y	Q	A	M	V	H	E	L	L	GI 1703494	
241	G	I	N	N	N	R	I	D	L	S	R	V	P	G	I	S	K	D	L	R	E	V	V	L	S	A	E	N	D	E	F	Y	A	N	N	M	Y	L	N	F	75871
241	G	I	N	N	N	R	I	D	L	S	R	V	P	G	I	S	K	D	L	R	E	V	V	L	S	A	E	N	D	E	F	Y	A	N	N	M	Y	L	N	F	GI 1703494

FIGURE 2A



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

281 AEIGSNIKNLMEDFQKKPKEQQKLESIAADMKAFFVENY PQ 75871  
 281 AEIGSNIKNLMEDFQKKRPKEQQKLESIAADMKAFFVENY PQ GI 1703494

321 FKKMSGTVSKHVTVVVGELSRLVSERNLLLEVSEVEQEELACQ 75871  
 321 FKKMSGTVSKHVTVVVGELSRLVSERNLLLEVSEVEQEELACQ GI 1703494

361 NDHSSALQNIKRLLQNPKVTEFDAARLVMLYALHYERHSS 75871  
 361 NDHSSALQNVKRLQLQNPKEVTEFDAVRLVMLYALHYERHSS GI 1703494

401 NSLPGLMMDLRNKGVSSEKYRKLVSADVVEYGGKRVRGSDDLF 75871  
 401 NSLPGLIVDLRSKGVAEKYRKLVSADVVEYGGKRVRGSDDLF GI 1703494

441 SPKDAVAITKQFLKGLKGVENVYVYTHQPPFLHETLDHLIKG 75871  
 441 SPKDAVAITKQFLKGLKGVENVYVYTHQPPFLHETLDHLIKG GI 1703494

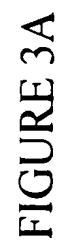
481 RLKENLYPYLGGPSTLRDRPQDIIIVFVIGGATYEEALTVYN 75871  
 481 RLKENLYPYLGGPSTLRDRPQDIIIVFVIGGATYEEALTVYN GI 1703494

521 LNRTPPGVRIVLGGTTVHNTKSFLEEVLASGLHSRSESS 75871  
 521 LNRTPPGVRIVLGGTTIHNTKSFLEEVLASGLHSRSESS GI 1703494

561 QVTSRSSASRR 75871  
 561 QATSSANRR GI 1703494

FIGURE 2B

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
RAFTSMAN		

44462550

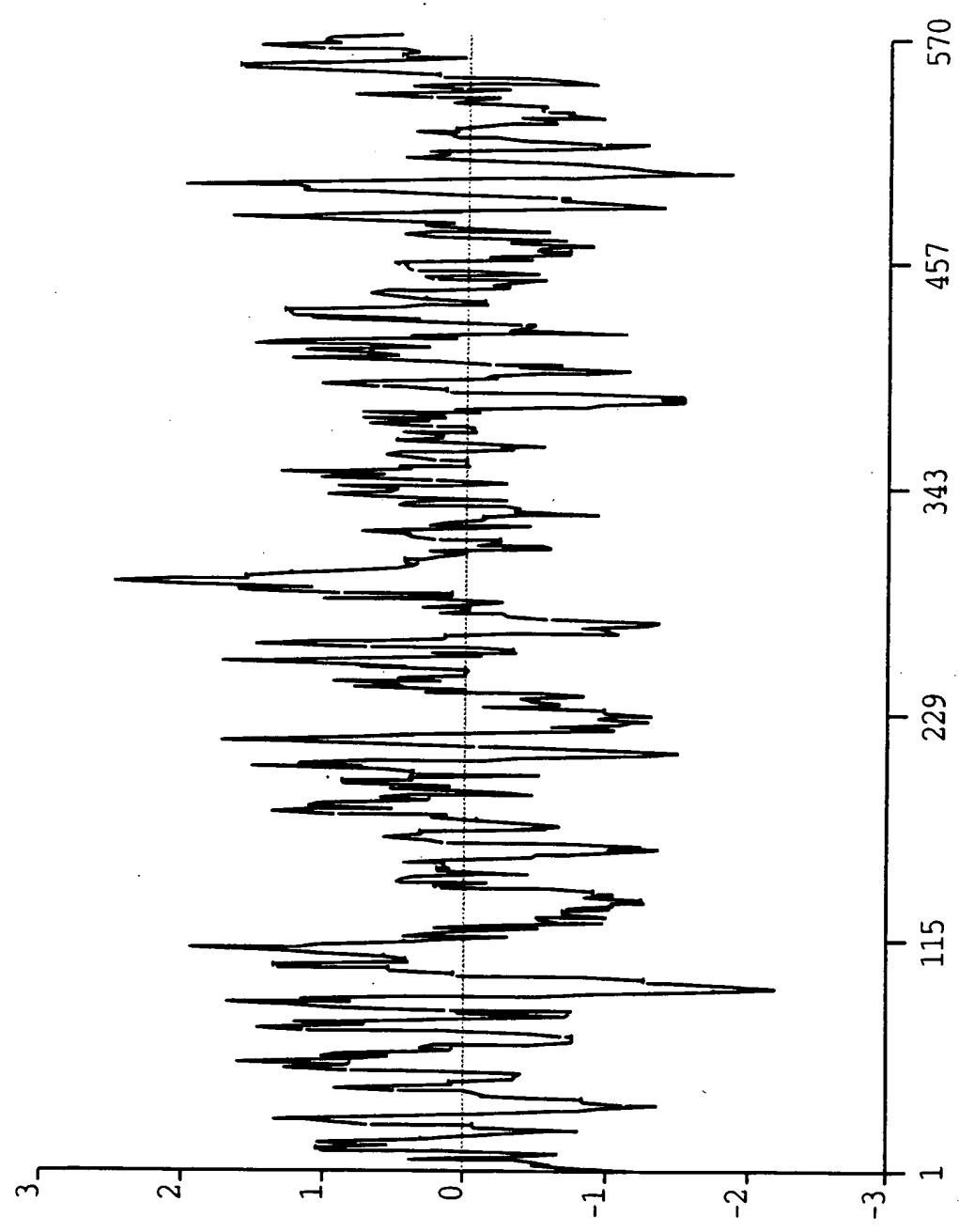


FIGURE 3B

5'-NGA GCG GGG CAG GGG CAG GTG TAG CCT CTG TGC CTC GTT GTC CCC TGG CGC TAC

9	18	27	36	45	54
5' NGA GCG GGG CAG GGG CAG GTG TAG CCT CTG TGC CTC GTT GTC CCC TGG CGC TAC					
63	72	81	90	99	108
CCG GAC ATC TCT CAG GGT GCC GGC ACC ATG AAG ATC TGG ACT TCG GAG CAC GTC					
117	126	135	144	153	162
TTT GAC CAC CCG TGG GAA ACT GTT ACA ACA GCT GCA ATG CAG AAA TAC CCA AAC					
F D H P W E T V T A A M Q K Y P N					
171	180	189	198	207	216
CCT ATG AAC CCA AGT GTG GTT GGA GTT GAT GTG TTG GAC AGA CAT ATA GAT CCC					
P M N P S V V G V D V L D R H I D P					
225	234	243	252	261	270
TCT GGA AAG TTG CAC AGC CAC AGA CTT CTC AGC ACA GAG TGG GGA CTG CCT TCC					
S G K L H S H R L L S T E W G L P S					
279	288	297	306	315	324
ATT GTG AAG TCT CTT ATT GGT GCA GCA AGA ACG AAA ACA TAT GTG CAA GAA CAT					
I V K S L I G A A R T K T Y V Q E H					
333	342	351	360	369	378
TCT GTA GTT GAT CCT GTA GAG AAA ACA ATG GAA CTT AAA TCT ACT AAT ATT TCA					
S V V D P V E K T M E L K S T N I S					

FIGURE 4A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

387	TTT ACA AAC ATG GTT TCA GTA GAT GAG AGA CTT ATA TAC AAA CCA CAT CCT CAG	414	423	432
	F T N M V S V D E R L I Y K P H P Q			
441	GAT CCA GAA AAA ACT GTT TTG ACA CAA GAA GCC ATA ATT ACC GTG AAA GGA GTT	468	477	486
	D P E K T V L T Q E A I I T V K G V			
495	AGC CTC AGC AGT TAC CTT GAA GGA CTG ATG GCA AGT ACG ATA TCC TCA AAT GCT	513	522	540
	S L S S Y L E G L M A S T I S S N A			
549	AGT AAA GGC CGA GAA GCA ATG GAA TGG GTA ATA CAT AAA TTA AAT GCT GAG ATT	567	576	594
	S K G R E A M E W V I H K L N A E I			
603	GAA GAA CTG ACA GCC TCA GCA AGA GGA ACC ATA AGG ACT CCA ATG GCA GCA GCA	621	630	648
	E L T A S A R G T I R T P M A A A			
657	GCG TTT GCA GAG AAG TGA TCG TGA CAG TTG GTA GAC AAC ATC GGG TAC TCC AGG	666	675	702
	A F A E K			
711	TCT CTC CAA ACT GAC TAT ATA TTT ATT TGT TAT TTT AAA AAT ACA ACT ATA TTT	720	729	756

FIGURE 4B



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

SECRET

1 MKIWTSEHVFDHPWETVTTAAMQKYPNPMNPSPVGVDDVLD 2056691  
1 MGKYCASLGV LKGPWDQVFAAFWQRYPNPYSKHVLTEDIV GI 969170

41 RHIDPSGKLLHSHRLLSTEWGLPSIVKSLIGARTKTYVQE 2056691  
41 HREVTADHKLLSRLLTKTNRMPRWAEFFPA NVAHNVYI GI 969170

81 HSVVDPVEKTMELKSTNISFTNMVSVDERLIYKPHPDPE 2056691  
81 VEDSIVDPKKNRRTMTTFTWNINHARLMAVEERCVCYRVNPNEN GI 969170

121 KTVLTQEAIIITVKGVSLSSYLEGLMASTISSNASKGREAM 2056691  
121 SSWTEVKREAWVSSSLFGVSRVQEEFGLARFKSNVTKSTK GI 969170

161 EWV IHKLN AEIEELTASARGTIRTPMAA AAF AEK 2056691  
161 GF EYVLARMQGEAPSKTLVETAKEATEKA ATEKA GI 969170

194  
201 KDLASKAATKKKQFV 2056691  
GI 969170

FIGURE 5

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

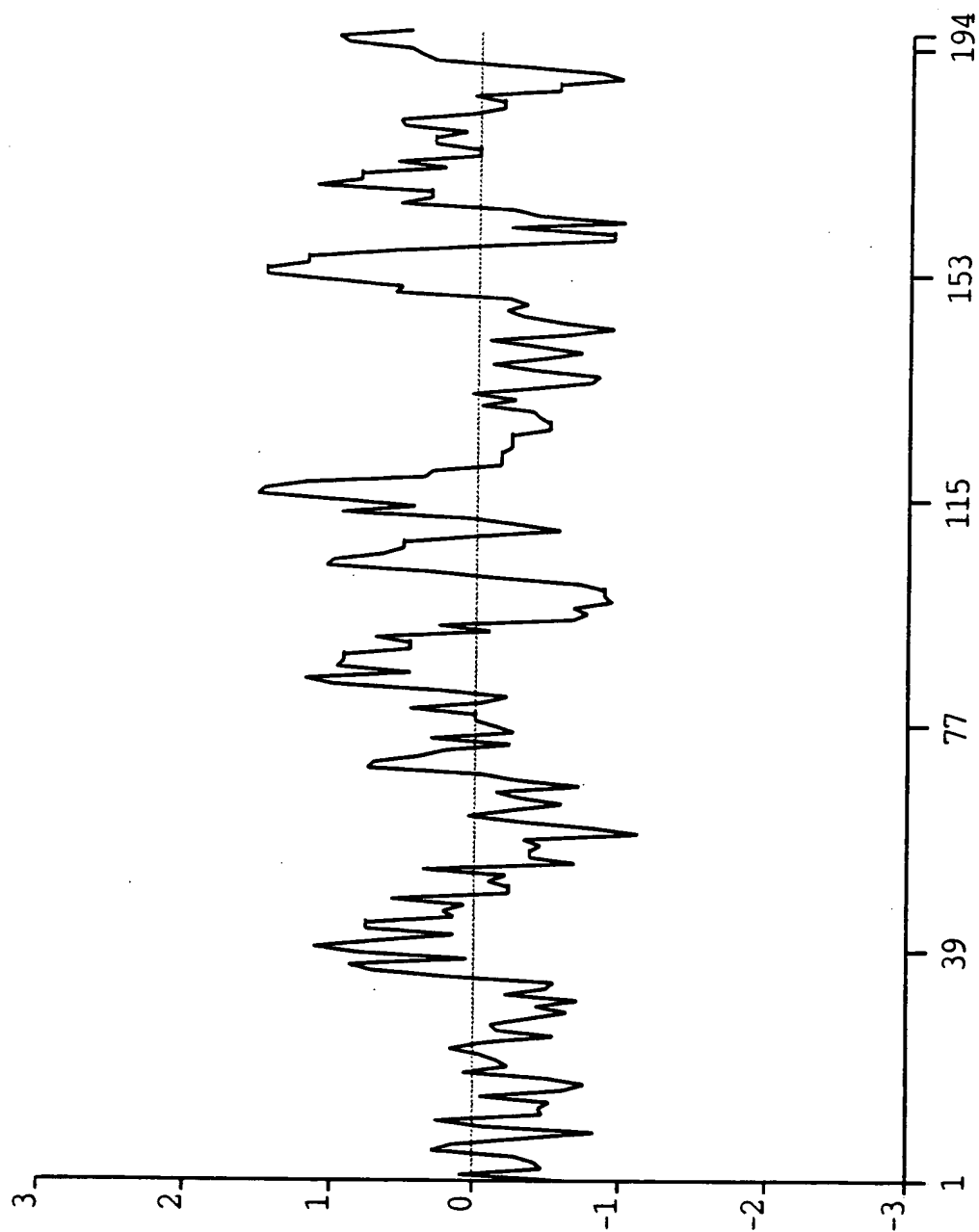


FIGURE 6A





APPROVED	D.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

5'-3' 3'5' 5'3'

9	18	27	36	45	54
5' NGG CCA ATC AGC GGC GGC GTT TCT TTT GCG GCT CCA CGT CGG CAC CAG CTG CGG					
63	72	81	90	99	108
GGC AAG ATG GAG GCG CTG ATT TTG GAA CCT TCC CTG TAT ACT GTC AAA GCC ATC					
M E A L I L E P S L Y T V K A I					
117	126	135	144	153	162
CTG ATT CTG GAC AAT GAT GGA GAT CGA CTT TTT GCC AAG TAC TAT GAC GAC ACC					
L I L D N D G D R L F A K Y Y D D T					
171	180	189	198	207	216
TAC CCC AGT GTC AAG GAG CAA AAG GCC TTT GAG AAG AAC ATT TTC AAC AAG ACC					
Y P S V K E Q K A F E K N I F N K T					
225	234	243	252	261	270
CAT CGG ACT GAC AGT GAA ATT GCC CTC TTG GAA GGC CTG ACA GTG GTA TAC AAA					
H R T D S E I A L L E G L T V V Y K					
279	288	297	306	315	324
AGC AGT ATA GAT CTC TAT TTC TAT GTG ATT GGC AGC TCC TAT GAA AAT GAG CTG					
S S I D L Y F Y V I G S S Y E N E L					
333	342	351	360	369	378
ATG CTT ATG GCT GTT CTG AAC TGT CTC TTC GAC TCA TTG AGC CAG ATG CTG AGG					
M L M A V L N C L F D S L S Q M L R					

FIGURE 7A

FIGURE 7B



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

1143	1152	1161	1170	1179	1188
TGT CCT CTG CCT TGG AAG AGG CTT TGG GAA TAG TTC ATA GGG AAG GGA CAA CAT					
1197	1206	1215	1224	1233	1242
GGA AGA AAC AGC GAT TTA AAT TGT ATT GAA CAG GGC ATA TAA AAT GCA TTC TGT					
1251	1260	1269	1278	1287	1296
ACC CTG ATC TGG CAT ATA GCT TCA AAA CTG CAG TGG CGA GTG TCC ATC TCT TAG					
1305	1314	1323	1332	1341	1350
TTA GCT ACC TTA ACT GTC CAC CCT TAC TAC CTG TGG GAT CGT TGC CTG GTT TGT					
1359	1368	1377	1386	1395	1404
CTT CTC TGT GTC CTG GAG CAA AGC CAG TTC CTA AAA CTA AAA CTC CAT TCT AGT					
L L C V L E Q S Q F L K L K L H S S					
1413	1422	1431	1440	1449	1458
CTT GGG AAG AAA AGT TTC TAC TCA GAA CTG GGG AAG GAG TGG AAC TTA TGA CTT					
1467	1476	1485	1494	1503	1512
GGG CCT CTA GGC TGT CTC TGT CCC CTC AGC TCC CCG ACA TGC ATT TAC TCT CTG					

FIGURE 7D

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

1521	1530	1539	1548	1557	1566
CCG TGG GTC	TGC AGT CGC	TGC AAC CTA	CCC TCT CTC	TGC CTC AGC	CTT ACA CCC
1575	1584	1593	1602	1611	1620
AAG CAG TAG	GTC TGT GCT	CTC CCT GTC	TCT AGG TCG	CTG AGA GAG	GTG CTT TTC
1629	1638	1647	1656	1665	1674
TTC ATA AAA	CCT TTG GGG	TTT GGA TTT	CCC CAG GAA	GAT GGA GAA	TGG AAT ACT
1683	1692	1701	1710	1719	1728
CAC TCT TGG	GTC TAA TCT	TTC CCC TTG	ACC CAG AAC	TTC CTC CCC	ACA AAA ATG
1737	1746	1755	1764	1773	1782
CCT TTA AAA	ACC TTC CTG	AGA CTT AAG	CAT TCT GCC	CCA CTT ACT	AAC TGC CAG
1791	1800	1809	1818	1827	1836
TTC TCC AGC	ACT GAG GTG	GGG CAG ATA	ACT GGG CAT	ATT TAA GGG	GGC ATC TTT
1845	1854	1863	1872	1881	1890
GTG TAA AAG	ATG CAT GGA	GTC AGG AGA	AAA CCA CCT	TCA TAA ACT	GCT CTG TGC

FIGURE 7E

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

1899 1908 1917 1926

AAA GAG GAA TAA AAC ATT TTT TCC AAA AAA AAA AAA AAA AAA A 3'

FIGURE 7F

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

1	MEALILEPSLYTVKAILILLDNDGDRLFAKYYYDDTYPSVKE	3086794
1	MEALILQPSLYTVKAILILLDNDGDRLFAKYYYDDTYPSVKE	GI 441486
41	QKAFENKIFNKTHRTDSEIALLLEGLTVVYKSSIDLYFYVI	3086794
41	QKAFENKIFNKTHRTDSEIALLLEGLTVVYKSSIDLYFYVI	GI 441486
81	GSSYENELMLMAVLNCLFDSLSQMLRKNVEKRALLENMEG	3086794
81	GSSYENELMLMTVLNCLFDSLSQMLRKNVEKRALLENMEG	GI 441486
121	LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTV	3086794
121	LFLAVDEIVDGGVILESDPQQVVHRVALRGEDVPLTEQTV	GI 441486
161	SQVLQSAKEQIKWSLLR	3086794
161	SQVLQSAKEQIKWSLLR	GI 441486

FIGURE 8



APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

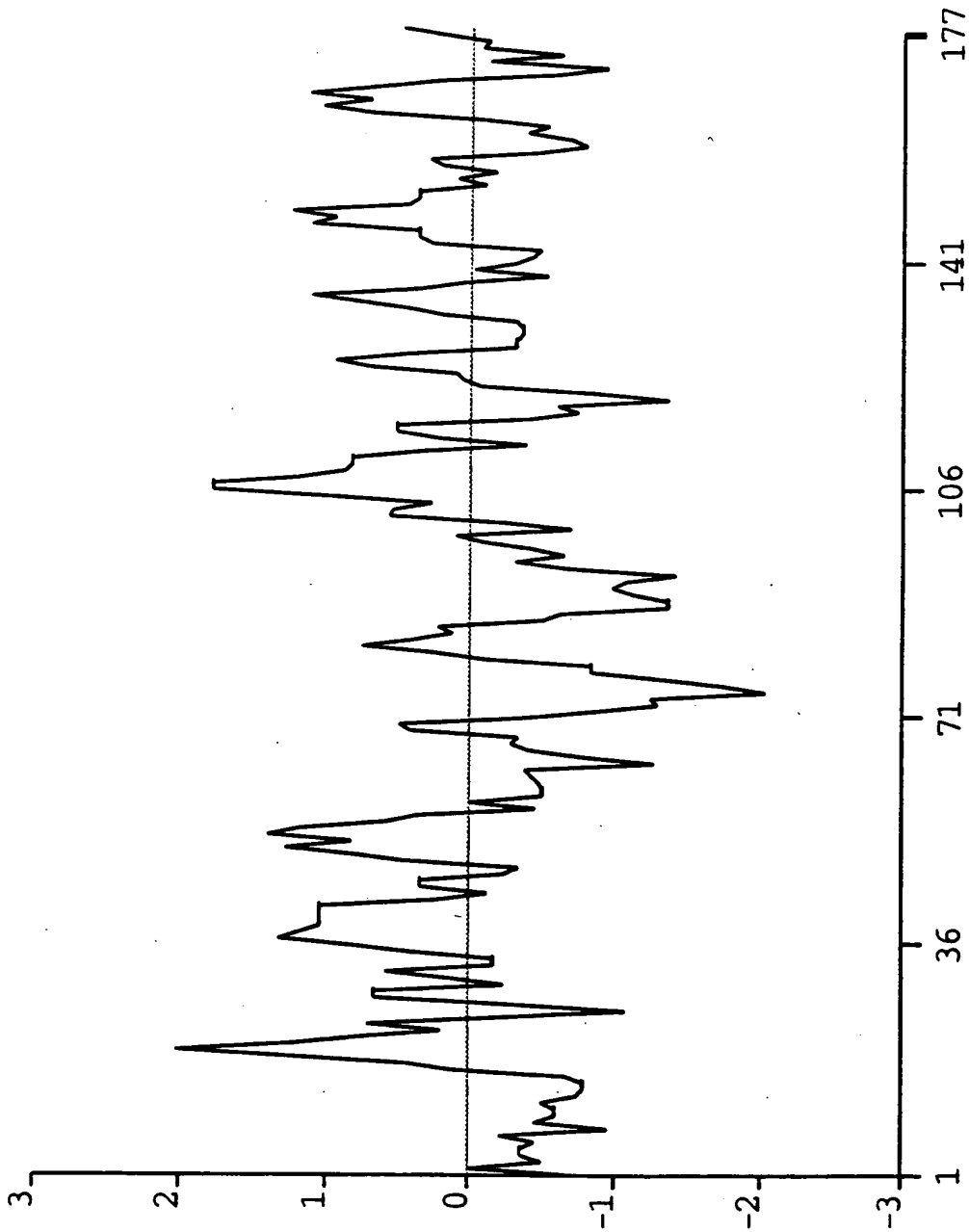


FIGURE 9A

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

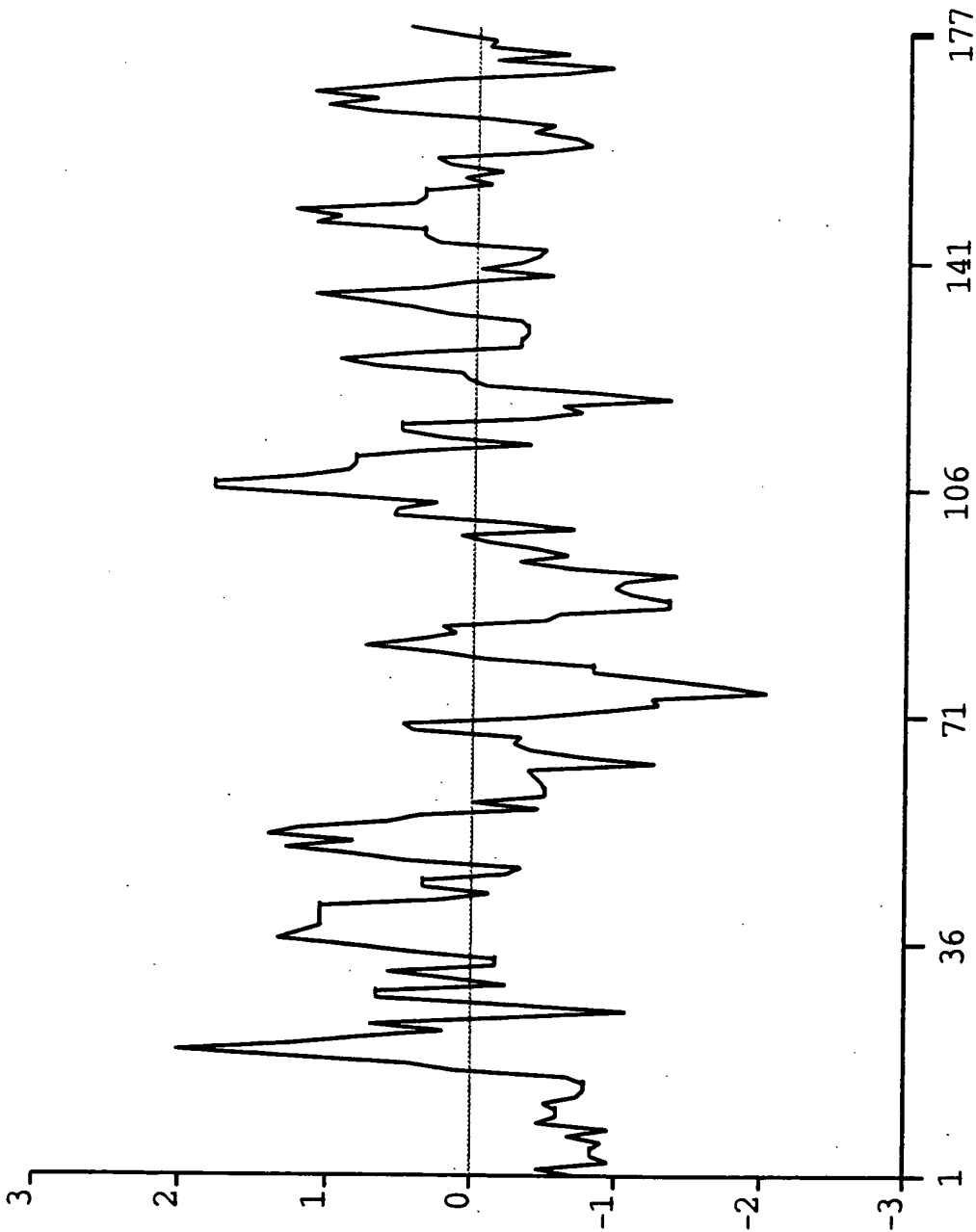


FIGURE 9B